

A1
Amend
upper Cu metal layer (including liners 20) but prior to the definition of contact regions 42 and 44 therein as a part of the damascene process.

In the Claims

Kindly amend claims 1, 6 and 10 as follows:

Sub
B1
A2
1. (Amended) A metal-to-metal antifuse formed over a lower Cu metal layer planarized with the top surface of a lower insulating layer comprising:
a lower barrier layer disposed over the lower Cu metal layer;
an antifuse material layer disposed over said lower barrier layer;
an upper barrier layer disposed over said antifuse material layer;
an upper insulating layer disposed over said upper barrier layer;
and
an upper Cu metal layer planarized with a top surface of the upper insulating layer and having a contact extending therethrough to make electrical contact with said upper barrier.

C3
C1
6. (Amended) The metal-to-metal antifuse of claim 2 wherein said first and second cap layers are formed from SiN.

Sub
B3
A1
10. (Amended) A method for fabricating a metal-to-metal antifuse comprising:
forming a lower barrier layer over a lower Cu metal layer planarized with the top surface of a lower insulating layer;
forming an antifuse material layer over said lower barrier layer;
forming an upper barrier layer disposed over said antifuse material layer;
forming an upper insulating layer disposed over said upper barrier layer and said antifuse layer;